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IN THE ABSTRACT

replace the abstract with:

An all-optical switch device for selectively directing an input beam to at least one of two output channels, the device comprising:

- (a) a polarizing beam splitting surface capable of splitting an input beam into two beam components of different polarizations and directing the split beam components to propagate along different optical paths, and capable of combining two beam components of different polarizations to produce at least one output beam;
- (b) a controllable polarization rotating medium accommodated in optical paths of the input beam components, and selectively operable to affect their polarization; and
- (c) beam directing means accommodated in optical paths of the beam components passed through the polarization rotating medium for directing the beam components onto the polarizing beam splitting surface to thereby produce at least one output beam propagating towards at least one selected output channel;

wherein the controllable polarization rotating medium comprises two elements made of a polarization rotating material, and the beam directing means comprises two retro-reflective elements associated with the two polarization rotating elements, respectively, so as to reflect the beam components of different polarization of the input beam towards the polarization rotating elements, and reflect the beams passed through the polarization rotating elements onto the polarizing beam splitting surface.